

**Notice of Allowability**

Application No.

10/695,375

Examiner

Chau Nguyen

Applicant(s)

BEZRUKOV ET AL.

Art Unit

2176

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/26/2007.
2. ☒ The allowed claim(s) is/are 1-4, 6, 9, 12-18, 23-27, 29-33, 35, 38, 39, 41-45 and 47-51.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**DOUG HUTTON**

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in telephone interview with Chad R. Walsh (Applicant's representative), registration #43,235 on 01/18/2008.

The application has been amended as follows:

*In the Claims:*

1. (Currently amended) A method of maintaining extensible markup language (XML) documents comprising:  
splitting an XML document into fragments according to rules stored in a configuration file, wherein said rules include a configuration rule, a sub-rule, and an encoding rule, wherein said configuration rule includes a fragment relation rule, an unparsed objection rule, and a hyperlink relation rule, wherein said sub-rule includes a pattern rule, an attribute rule, and a class rule, and wherein said encoding rule includes an internal entity name encoding rule, an external entity name encoding rule, an unparsed object encoding rule, and a hyperlink encoding rule;

binding each of the fragments to an object in a content management system;  
said content management system generating a respective reference between the XML document and each of the fragments; and  
associating multiple fragments with a particular object in the content management system.

9. (Currently amended) The method of claim 1 ~~wherein the rules include configuration rules~~, the method further comprising:  
analyzing content of the XML document using the configuration files.

12. (Currently amended) The method of claim 1[[9]] wherein the ~~configuration rules include a~~ fragment rule that removes a fragment from the XML document and replaces the fragment with a reference.

13. (Currently amended) The method of claim 1[[9]] wherein the ~~configuration rules include an~~ unparsed object rule that extracts a string associated with an unparsed object and replaces the string with a reference.

14. (Currently amended) The method of claim 1[[9]] wherein the ~~configuration rules include a~~ hyperlink rule that replaces a link to another object attribute with a reference.

15. (Currently amended) The method of claim 1 wherein the ~~rules include sub-rules, and said sub-rules include a~~ pattern rule that extracts textual content from a fragment.

16. (Currently amended) The method of claim 1 wherein the ~~rules include sub-rules, and said sub-rules include an~~ attribute rule that assigns each object with an attribute type.

18. (Currently amended) The method of claim 1 wherein the ~~rules include sub-rules, and said sub-rules include a~~ class rule that provides a class name to an object.

19. (Cancelled).

20. (Cancelled).

21. (Cancelled).

22. (Cancelled).

23. (Currently amended) The method of claim 1 wherein the fragment includes a sub-fragment, the method further comprising binding the sub-fragment to an object in a content management system[[;]], and providing a reference between the fragment and the sub-fragment.

24. (Currently amended) A computer program product, tangibly embodied in a machine-readable storage device, ~~for executing instructions on a processor, the computer program product being operable to cause a machine to:~~ the computer program product including instructions that, when executed, cause a processor to perform instructions comprising:

split an XML document into fragments according to a plurality of rules stored in a configuration file, wherein said rules include a configuration rule, a sub-rule, and an encoding rule, wherein said configuration rule includes fragment relation rule, an unparsed objection rule, and a hyperlink relation rule, wherein said sub-rule includes a pattern rule, an attribute rule, and a class rule, and wherein said encoding rule includes an internal entity name encoding rule, an external entity name encoding rule, an unparsed object encoding rule, and a hyperlink encoding rule;

bind each of the fragments to an object in a content management system;  
generate, by said content management system, a respective reference between the XML document and each of the fragments; and  
associate multiple fragments with a particular object in the content management system.

30. (Currently amended) A system tangibly embodied on a computer-readable medium comprising:

a means for splitting an XML document into fragments according to a plurality of rules stored in a configuration file, wherein said rules include a configuration rule, a sub-

rule, and an encoding rule, wherein said configuration rule includes fragment relation rule, an unparsed objection rule, and a hyperlink relation rule, wherein said sub-rule includes a pattern rule, an attribute rule, and a class rule, and wherein said encoding rule includes an internal entity name encoding rule, an external entity name encoding rule, an unparsed object encoding rule, and a hyperlink encoding rule;

a means for binding each of the fragments to an object in a content management system;

a means for generating, in said content management system, a respective reference between the XML document and each of the fragments; and

a means for associating multiple fragments with a particular object in the content management system.

42. (Currently amended) The method of claim 1, wherein the plurality of rules comprise rules classifying relations between XML documents, the fragments, and the objects, ~~including a~~ wherein the fragment relation rule is based on a relation between any two XML fragments that are both part of the XML document, a wherein the unparsed object rule is based on a relation between an XML object and an unparsed object that are both part of the XML document, and a wherein the hyperlink relation rule is based on a relation between an XML object that is part of the XML document and an object that is not part of the XML document.

43. (Currently amended) The computer program product of claim 24, wherein the plurality of rules comprise rules classifying relations between XML documents, the fragments, and the objects, ~~including a~~ wherein the fragment relation rule is based on a relation between any two XML fragments that are both part of the XML document, a wherein the unparsed object rule is based on a relation between an XML object and an unparsed object that are both part of the XML document, and a wherein the hyperlink relation rule is based on a relation between an XML object that is part of the XML document and an object that is not part of the XML document.

44. (Currently amended) The system of claim 30, wherein the plurality of rules comprise rules classifying relations between XML documents, the fragments, and the objects, ~~including a~~ wherein the fragment relation rule is based on a relation between any two XML fragments that are both part of the XML document, a wherein the unparsed object rule is based on a relation between an XML object and an unparsed object that are both part of the XML document, and a wherein the hyperlink relation rule is based on a relation between an XML object that is part of the XML document and an object that is not part of the XML document.

45. (Currently amended) A method comprising:  
~~specifying configuration rules in a content management system establishing relations between an XML document, a fragment of an XML document, and a particular object in the content management system, wherein said rules include a configuration rule, a sub-~~

rule, and an encoding rule, wherein said configuration rule includes fragment relation rule, an unparsed objection rule, and a hyperlink relation rule, wherein said sub-rule includes a pattern rule, an attribute rule, and a class rule, and wherein said encoding rule includes an internal entity name encoding rule, an external entity name encoding rule, an unparsed object encoding rule, and a hyperlink encoding rule;

analyzing the content of a plurality of XML documents using the configuration rules;

splitting a plurality of XML documents into fragments of content using the configuration rules;

associating each fragment with a particular object in said content management system; and

generating a reference between each XML document and a corresponding fragment,

wherein the content management system assembles XML documents using the references, and in accordance therewith, reuses the fragments of content in a plurality of different XML document.

46. (Cancelled)

47. (Currently amended) The method of claim ~~[[46]]45~~, ~~the fragment relation rules comprising a pattern sub-rule, and~~ wherein the content management system locates fragments based on pattern sub-rule.



48. (Currently amended) The method of claim ~~[[46]]45~~, ~~the configuration rules further comprising an~~ wherein the unparsed object rule ~~for extractings~~ a string from a fragment that includes an encoded link to an unparsed object.

49. (Currently amended) The method of claim ~~[[48]]45~~, ~~the configuration rules further comprising~~ wherein the hyperlink relation rule ~~for detectings~~ and ~~generatings~~ a relation between a fragment and an object when a target object does not semantically belong to said fragment.

50. (Currently amended) The method of claim ~~[[49]]45~~ ~~further comprising~~ reference wherein the encoding rules for making references unique, ~~wherein internal entity names, external entity names, unparsed objects, and hyperlinks have separate reference encoding rules.~~

51. (Currently amended) The method of claim ~~45~~ ~~further comprising a pattern sub-rule, an attribute sub-rule, and a class sub-rule~~, wherein the content management system uses the pattern sub-rule to extract content, wherein the content management system uses the attribute sub-rule for binding extracted content to an object attribute, and wherein the content management system uses the class sub-rule for classifying objects.

### REASONS FOR ALLOWANCE

1. Claims 1-4, 6, 9, 12-18, 23-27, 29-33, 35, 38-39, 41-45 and 47-51 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:

In interpreting the claims in light of the specification and applicant's arguments, the Examiner finds the claimed invention is patentably distinct from the prior art of record.

The prior art of record includes Azami, US Patent Application Publication No. US 2004/0064481 A1, and Lindblad et al. (Lindblad), US Patent Application Publication No. US 2004/0103105.

Azami discloses an original structured data such as XML data is divided into a plurality of fragments, and these fragments can be later concatenated as the original structured data (page 4, paragraph [0062]). Azami further discloses creating a fragment configuration information for each of the fragments, the fragment configuration information includes position information specifying the position of the fragment data in the original structured data, and reference information specifying the fragment data (page 4, paragraph [0062]). Azami further discloses an ID (object) uniquely attached to each fragment, and each fragment can be subdivided into smaller fragments (page 5, paragraphs [0067]-[0068], page 6, paragraphs [0083]-[0086], and page 11, paragraph [0148], and Figure 25). Azami further discloses the fragment configuration information is stored in a metadata concatenation unit (content management system) (page 6, paragraph [0085]). Azami further discloses fragment configuration describes

information (rules) on the contents of fragment data so that a user or an application can process the fragment data based on that information (pages 4-5, paragraph [0062]). In addition, Azami discloses "replace" command, "delete" command, or "reset" command may be used for the fragment update command to dynamically update the structured metadata tree (page 9, paragraph [0123]).

Lindblad discloses parsing the structured data XML into tokens (fragments) according to token rules stored in a parameter storage, the parser also includes a subtree finder that allocates nodes (tokens) identified in the tokenized document to subtree according to subtree rules stored in parameter storage (page 9, paragraphs [0084]-[0085]).

Claim 1 is allowed because the prior art of record does not expressly disclose alone or in combination splitting an XML document into fragments according to rules wherein said rules include a configuration rule, a sub-rule, and an encoding rule, wherein said configuration rule includes fragment relation rule, an unparsed objection rule, and a hyperlink relation rule, wherein said sub-rule includes a pattern rule, an attribute rule, and a class rule, and wherein said encoding rule includes an internal entity name encoding rule, an external entity name encoding rule, an unparsed object encoding rule, and a hyperlink encoding rule. Examiner finds the specification on page 5, lines 15-17 to be persuasive since the applicant(s) describe(s) using the configuration rule to analyze the content of an XML document, split the XML document into fragments and sub-fragments, and detect relations to the non-XML objects, also page 7, lines 13-

21 and page 8, lines 26-32 in the specification for describing sub-rule and encoding rule, respectively are persuasive as well.

Claims 2-4, 6, 9, 12-18, 23, 38-39, 41 and 42 are further limit independent claim 1. Claims 24-27, 29-35, 43-45 and 47-51 are allowed for the same reasons set forth for claims 1-4, 6, 9, 12-18, 23, 38-39, 41 and 42.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau Nguyen whose telephone number is (571) 272-4092. The Examiner can normally be reached on Monday-Friday from 8:30 am to 5:30 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Doug Hutton, can be reached at (571) 272-4137.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. On July 15, 2005, the Central Facsimile (FAX) Number will change from 703-872-9306 to 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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